```
Connecting via Winsock to STN


Welcome to STN International!  Enter x:x

LOGINID:ssptafxl1600

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page for STN Seminar Schedule - N. America
 NEWS  2  MAY 01   New CAS web site launched
 NEWS  3  MAY 08   CA/CAplus Indian patent publication number format defined
 NEWS  4  MAY 14   RDISCLOSURE on STN Easy enhanced with new search and display
                   fields
 NEWS  5  MAY 21   BIOSIS reloaded and enhanced with archival data
 NEWS  6  MAY 21   TOXCENTER enhanced with BIOSIS reload
 NEWS  7  MAY 21   CA/CAplus enhanced with additional kind codes for German
                   patents
 NEWS  8  MAY 22   CA/CAplus enhanced with IPC reclassification in Japanese
                   patents
 NEWS  9  JUN 27   CA/CAplus enhanced with pre-1967 CAS Registry Numbers
 NEWS 10  JUN 29   STN Viewer now available
 NEWS 11  JUN 29   STN Express, Version 8.2, now available
 NEWS 12  JUL 02   LEMBASE coverage updated
 NEWS 13  JUL 02   LMEDLINE coverage updated
 NEWS 14  JUL 02   SCISEARCH enhanced with complete author names
 NEWS 15  JUL 02   CHEMCATS accession numbers revised
 NEWS 16  JUL 02   CA/CAplus enhanced with utility model patents from China
 NEWS 17  JUL 16   CAplus enhanced with French and German abstracts
 NEWS 18  JUL 18   CA/CAplus patent coverage enhanced
 NEWS 19  JUL 26   USPATFULL/USPAT2 enhanced with IPC reclassification
 NEWS 20  JUL 30   USGENE now available on STN
 NEWS 21  AUG 06   CAS REGISTRY enhanced with new experimental property tags
 NEWS 22  AUG 06   BEILSTEIN updated with new compounds
 NEWS 23  AUG 06   FSTA enhanced with new thesaurus edition
 NEWS 24  AUG 13   CA/CAplus enhanced with additional kind codes for granted
                   patents

 NEWS EXPRESS  29 JUNE 2007:  CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

  All use of STN is subject to the provisions of the STN Customer
  agreement.  Please note that this agreement limits use to scientific
  research.  Use for software development or design or implementation
  of commercial gateways or other similar uses is prohibited and may
  result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:03:48 ON 15 AUG 2007
```

```
=> file caplus medline biosis scisearch
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'CAPLUS' ENTERED AT 11:04:07 ON 15 AUG 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MEDLINE' ENTERED AT 11:04:07 ON 15 AUG 2007

FILE 'BIOSIS' ENTERED AT 11:04:07 ON 15 AUG 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'SCISEARCH' ENTERED AT 11:04:07 ON 15 AUG 2007
Copyright (c) 2007 The Thomson Corporation

=> s fmoc and cyclization
L1          732 FMOC AND CYCLIZATION

=> s l1 and (PNA or peptide nucleic)
L2            5 L1 AND (PNA OR PEPTIDE NUCLEIC)

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3            2 DUP REM L2 (3 DUPLICATES REMOVED)

=> d l3 bib ab 1-2

L3   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN  DUPLICATE 1
AN   2002:789715  CAPLUS
DN   138:14173
TI   Continuous Solid-Phase Synthesis and Disulfide Cyclization of
     Peptide-PNA-Peptide Chimeras
AU   Tian, Xiaobing; Wickstrom, Eric
CS   Kimmel Cancer Center, Departments of Biochemistry & Molecular Pharmacology
     and Microbiology & Immunology, Thomas Jefferson University, Philadelphia,
     PA, 19107, USA
SO   Organic Letters (2002), 4(23), 4013-4016
     CODEN: ORLEF7; ISSN: 1523-7060
PB   American Chemical Society
DT   Journal
LA   English
OS   CASREACT 138:14173
AB   Chelator peptides were extended from the N-terminus of peptide
     nucleic acid (PNA) dodecamers, which in turn were
     extended from the N-termini of disulfide-bridged peptide ligand analogs,
     using Fmoc coupling for all residues.  The cysteine thiols were
     cyclized on a solid support, either before or after PNA
     extension.  This simplified synthetic approach might allow preparation of a
     variety of multipeptide disulfide-bridged PNA chimeras.
RE.CNT  22    THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2000:894845  CAPLUS
DN   134:252622
TI   Chemical synthesis of cyclic peptide nucleic
     acid-peptide hybrids
AU   Planas, Marta; Bardaji, Eduard; Barany, George
CS   Department of Chemistry, University of Minnesota, MN, 55455, USA
SO   Peptides for the New Millennium, Proceedings of the American Peptide
     Symposium, 16th, Minneapolis, MN, United States, June 26-July 1, 1999
```

(2000), Meeting Date 1999, 786-787. Editor(s): Fields, Gregg B.; Tam, James P.; Barany, George. Publisher: Kluwer Academic Publishers, Dordrecht, Neth.
CODEN: 69ATHX
DT Conference
LA English
AB A symposium report. The cyclic peptide nucleic acid (PNA)-peptide hybrids were synthesized by first carrying out solid-phase synthesis of the linear sequences, followed by cyclization either while resin-bound, or in solution A three-dimensional orthogonal Fmoc (9-fluorenylmethoxycarbonyl)/tert-Bu/allyl scheme was used to obtain the head-to-tail cyclic units.
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 11:03:48 ON 15 AUG 2007)

FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT 11:04:07 ON 15 AUG 2007
L1 732 S FMOC AND CYCLIZATION
L2 5 S L1 AND (PNA OR PEPTIDE NUCLEIC)
L3 2 DUP REM L2 (3 DUPLICATES REMOVED)

=> s fmoc and (pna or peptide nucleic)
L4 243 FMOC AND (PNA OR PEPTIDE NUCLEIC)

=> s l4 and (piperidine and nmp)
L5 1 L4 AND (PIPERIDINE AND NMP)

=> d l5 bib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:231432 CAPLUS
DN 144:299344
TI Solid phase conjugation of complexing agents and targeting moieties
IN Syud, Faisal A.; Brogan, John B.; Kramer, Daniel Joshua
PA General Electric Company, USA
SO U.S. Pat. Appl. Publ., 15 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006058218	A1	20060316	US 2004-937323	20040910
US 2004-937323		20040910		

PI
PRAI
OS MARPAT 144:299344
AB There is provided a technique for conjugating one or more complexing agents with a targeting moiety, such as natural amino acids, unnatural amino acids, peptides, peptide nucleic acids, nucleotides, and analogs and derivs. thereof. The one or more complexing agents are conjugated at one or more free amino groups of the targeting moiety while the moiety is attached to a solid substrate. Thus, peptide nucleic acids (PNA) was synthesized using solid-phase synthesis techniques with Fmoc protecting groups on the terminal amino groups of the PNA monomers. 5-(4-Fmoc-aminoethyl-3,5-dimethoxyphenoxy)valeric acid-MBHA resin was chosen as the polymer substrate. The side chains of the PNA monomers was protected using Bhoc groups. The Fmoc-protected amine on the resin may be deprotected by washing with 20 % piperidine in DMF. To conjugate 1,4,8,11-Tetraazacyclotetradecane-

N,N',N'',N'''-tetraacetic acid (TETA) with the terminal amino group of the resin-bound PNA, a premixed solution of TETA-t-Bu3 dissolved in N-methylpyrrolidinone (NMP), excess equivalent of O-(7-Azabenzotriazol-1-yl)-N,N,N',N'-tetramethyluronium hexafluorophosphate (HATU), and N,N-diisopropylethylamine (DIEA) in pyridine was added and the reaction was carried out.

```
=> s l4 and (piperidine or nmp)
L6            6 L4 AND (PIPERIDINE OR NMP)

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7            6 DUP REM L6 (0 DUPLICATES REMOVED)

=> s l7 not l5
L8            5 L7 NOT L5

=> d l8 bib ab 1-5

L8   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2003:470499  CAPLUS
DN   139:53311
TI   Preparation of novel functional group-modified peptide
     nucleic acids (PNA) and method for their preparation
IN   Ikeda, Kazufumi; Sotozaki, Madoka
PA   Japan
SO   Jpn. Kokai Tokkyo Koho, 20 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   JP 2003171396        A     20030620    JP 2002-121667          20020424
     US 2003229201        A1    20031211    US 2003-422285          20030424
     US 6809190           B2    20041026
     JP 2006158400        A     20060622    JP 2005-371734          20051226
PRAI JP 2001-285191       A     20010919
     JP 2002-121667       A     20020424
OS   CASREACT 139:53311; MARPAT 139:53311
AB   A new method for preparation of PNA oligomers introduced with mols.
     possessing various functionalities such as optical functionality, membrane
     permeability, organ selectivity, antiseptic activity, and mol. recognition
     at the desired position on the backbone of PNA oligomers is
     provided, which is superior in cost performance and enables rapid
     introduction of functional mols.  A functional group-modified PNA
     oligomer is prepared by reaction of protected PNA monomers each
     containing adenine, guanine, cytosine, or thymine, e.g. Fmoc
     -NHCH2CH2N(COCH2X)CH2CO2H or BocNHCH2CH2N(COCH2X)CH2CO2H (I; X = nucleic
     acid base) with Fmoc-ω-amino-acid-Boc- PNA-OH of
     formula BocNHCH2CH2N[CO(CH2)nNH-Fmoc]CH2CO2H (II; wherein n =
     1-15), introducing a functional mol. having free carboxylic acid to the
     rersulting PNA oligomer, and deprotection.  PNA
     oligomers are useful for gene therapy.  Thus, a PNA oligomer,
     H2N-G-A-T-pMR-G-A-C-G-C-CONH2 (pMR = Q; A, C, G, T = PNA monomer
     unit), was prepared by the Boc solid phase method which involved sequential
     coupling of PNA monomer units I (X = thymine, cytosine, adenine,
     and guanine) and II (n = 1) on a MBHA resin.  When II (n = 1) was
     condensed, Fmoc was removed by treatment with piperidine
     before coupling thymine PNA monomer unit and then p-Methyl red
     (optical functional mol.) was condensed using HBTU and
     diisopropylethylamine, followed by coupling thymine, adenine, and guanine
     PNA monomer units and deprotecting Z group and simultaneously
     cleaving the PNA oligomer from the solid support.
```

L8 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:409049 CAPLUS
DN 135:167010
TI A Convenient Solid-Phase Method for Synthesis of 3'-Conjugates of Oligonucleotides
AU Stetsenko, Dmitry A.; Gait, Michael J.
CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, CB2 2QH, UK
SO Bioconjugate Chemistry (2001), 12(4), 576-586
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 135:167010
AB We present a new procedure for the preparation of 3'-conjugates of oligonucleotides through solid-phase synthesis. A suitable universal solid support was readily prepared using a series of peptide-like coupling reactions to incorporate first a spacer and then an L-homoserine branching unit. The N-α-position of the homoserine carries an Fmoc protecting group that is removed by treatment with piperidine to liberate an amino group suitable for attachment of the conjugate (e.g., small organic mol., fluorescent group, cholesterol, biotin, amino acid, etc.) or for assembly of a short peptide. The side-chain hydroxyl group of the homoserine carries a trityl protecting group. After TFA deprotection, the hydroxyl group acts as the site for oligonucleotide assembly. An addnl. spacer, such as aminohexanoyl, may be incorporated easily between the conjugate mol. and the oligonucleotide. A number of examples of synthesis of 3'-conjugates of oligonucleotides and their analogs are described that involve standard automated oligonucleotide assembly and use of com. available materials. The linkage between oligonucleotide and 3'-conjugate is chirally pure and is stable to conventional ammonia treatment used for oligonucleotide deprotection and release from the solid support. The homoserine-functionalized solid support system represents a simple and universal route to 3'-conjugates of oligonucleotides and their derivs.
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:567007 CAPLUS
DN 131:322895
TI Use of the Dithiasuccinoyl (Dts) Amino Protecting Group for Solid-Phase Synthesis of Protected Peptide Nucleic Acid (PNA) Oligomers
AU Planas, Marta; Bardaji, Eduard; Jensen, Knud J.; Barany, George
CS Department of Chemistry, University of Minnesota, Minneapolis, MN, 55455, USA
SO Journal of Organic Chemistry (1999), 64(20), 7281-7289
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 131:322895
AB Peptide nucleic acid (PNA) oligomers replace the oligonucleotide backbone of DNA with an achiral and neutral poly[N-(2-aminoethyl)glycine] backbone, and the four natural nucleobases are attached through methylene carbonyl linkages to the glycine nitrogens. The present work describes the efficient conversion of Nω-Boc/side-chain Z-protected PNA monomers to the corresponding derivs. protected by the thiolyzable Nω-dithia-succinoyl (Dts) function. After acidolytic removal of Boc, treatment with bis(ethoxy-thiocarbonyl) sulfide gave the Nω-ethoxy-thiocarbonyl (Etc) derivs., which were silylated at the α-carboxyl and converted to the heterocycle by reaction with (chloro-carbonyl)sulfenyl chloride. Net yields of homogeneous monomers were 71-78%. Conditions in the

solid-phase mode for thiolytic removal of the Dts group, and for coupling of protected monomers, have been studied extensively and optimized. A protocol featuring (i) Dts removal with dithiothreitol (DTT) (0.5 M) in acetic acid (HOAc) (0.5 M)-CH2Cl2 (2 + 8 min); (ii) short neutralization with N,N-diisopropyl-ethylamine (DIEA)-CH2Cl2 (1:19, 1 + 2 min); and (iii) coupling mediated by HBTU-DIEA (3:1) in N-methyl-2-pyrrolidinone (NMP) (3 h) was applied to the solid-phase synthesis of Dts-T4-Gly-NH2, Dts-G(Z)-G(Z)-T-A(Z)-Gly-NH2, Dts-A(Z)-T-C(Z)-G(Z)-Gly-NH2, and Dts-G(Z)-C(Z)-A(Z)-T-Gly-NH2. The indicated protected PNA derivs. were released from the support, and their structures were verified by mass spectrometry.

RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1995:994427 CAPLUS
DN 124:87804
TI Peptide nucleic acid synthesis using a base labile amino protecting group.
IN Breipohl, Gerhard Dr; Uhlmann, Eugen Dr; Knolle, Jochen Dr
PA Hoechst A.-G., Germany
SO Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 672701	A1	19950920	EP 1995-103319	19950308
	EP 672701	B1	19990728		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	DE 4408533	A1	19950928	DE 1994-4408533	19940314
	AT 182602	T	19990815	AT 1995-103319	19950308
	ES 2136755	T3	19991201	ES 1995-103319	19950308
	FI 9501129	A	19950915	FI 1995-1129	19950310
	AU 9514800	A	19950921	AU 1995-14800	19950310
	AU 683714	B2	19971120		
	CA 2144473	A1	19950915	CA 1995-2144473	19950313
	NO 9500958	A	19950915	NO 1995-958	19950313
	NO 321035	B1	20060306		
	JP 07291909	A	19951107	JP 1995-54641	19950314
	US 6121418	A	20000919	US 1997-967197	19971029
	US 6316595	B1	20011113	US 2000-495457	20000201
PRAI	DE 1994-4408533	A	19940314		
	US 1995-402844	B1	19950313		
	US 1997-967197	A3	19971029		

AB RAk[NHCH2CH2N(COCH2B)CH2CO]nQlQ1 (R = H, alkanoyl, alkoxycarbonyl, cycloalkanoyl, aroyl, heteroaroyl, group which promotes intracellular uptake or interacts with target nucleic acids; A, Q = amino acid residue; Q1 = OH, amino; B = nucleobase or prodrug form thereof; l = 0-20; n = 1-50), were prepared by solid phase synthesis. Thus, H-[Aeg(T)]8-Lys-NH2 [Aeg(T) = N-(2-aminoethyl)-N-[(1-thyminyl)acetyl]glycyl] was prepared by coupling of FMOC-Lys(BOC)-OH and FMOC-Aeg(T)-OH (preparation given) on 5-(FMOC-amino-4-methoxybenzyl)-2,4-dimethoxyphenylpropionic acid-derivatized aminomethylpolystyrene resin using an activator solution of PyBOP (PyBOP = benzotriazolyl-1-oxytripyrrolidiniophosphonium hexafluorophosphate) in DMF, NEM (N-ethylmorpholine) in DMF as base for activation, and 20% piperidine in DMF for deprotection.

L8 ANSWER 5 OF 5 MEDLINE on STN
AN 2002229543 MEDLINE
DN PubMed ID: 11966434
TI Parallel synthesis of PNA-peptide conjugate libraries.
AU Awasthi Satish Kumar; Nielsen Peter E

CS Center for Biomolecular Recognition, IMBG, Biochemistry B, The Panum Institute, University of Copenhagen, Blegdamsvej 3c, Copenhagen N, DK 2200, Denmark.
SO Combinatorial chemistry & high throughput screening, (2002 May) Vol. 5, No. 3, pp. 253-9.
Journal code: 9810948. ISSN: 1386-2073.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LA English
FS Priority Journals
EM 200206
ED Entered STN: 23 Apr 2002
Last Updated on STN: 5 Jun 2002
Entered Medline: 4 Jun 2002
AB An optimized semi-automatic protocol for parallel synthesis of up to 96 peptide nucleic acids (PNA) or PNA
-peptide conjugates using Boc-protection strategy has been developed using a robotic system. The approach is illustrated by synthesizing PNA and PNA-peptide libraries varying between 15 and 27 amino acid units. The peptides (NLS (nuclear localization signal) or Tat-peptide) were attached to N-terminus of the PNA. The method was found to be far superior to that based on the SPOT/Fmoc protocol by which PNA oligomers are synthesized on a modified cellulose membrane. On a 0.5 micromole scale the method typically yielded 2 mg product of 90% purity by HPLC/MALDI-TOF analysis. This approach is suitable for screening of a large number of PNA and/or peptide sequences for biochemical and biological studies.

=> d his

(FILE 'HOME' ENTERED AT 11:03:48 ON 15 AUG 2007)

FILE 'CAPLUS, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT 11:04:07 ON 15 AUG 2007
L1 732 S FMOC AND CYCLIZATION
L2 5 S L1 AND (PNA OR PEPTIDE NUCLEIC)
L3 2 DUP REM L2 (3 DUPLICATES REMOVED)
L4 243 S FMOC AND (PNA OR PEPTIDE NUCLEIC)
L5 1 S L4 AND (PIPERIDINE AND NMP)
L6 6 S L4 AND (PIPERIDINE OR NMP)
L7 6 DUP REM L6 (0 DUPLICATES REMOVED)
L8 5 S L7 NOT L5

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	60.57	60.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.46	-5.46

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 11:12:52 ON 15 AUG 2007

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5667	piperidine same fmoc	US-PGPUB; USPAT	ADJ	ON	2007/08/15 10:57
L2	2934	piperidine same fmoc same (minute or "min." or "mins." or min or mins)	US-PGPUB; USPAT	ADJ	ON	2007/08/15 10:57
L3	199	piperidine same fmoc same ("2 minute" or "2 min" or "2 mins")	US-PGPUB; USPAT	ADJ	ON	2007/08/15 11:00
L4	15	piperidine same fmoc same ("two minute" or "two min" or "two mins")	US-PGPUB; USPAT	ADJ	ON	2007/08/15 11:00
L5	41	l3 and pna	US-PGPUB; USPAT	ADJ	ON	2007/08/15 11:00

US-PAT-NO: 5223400

DOCUMENT-IDENTIFIER: US 5223400 A

TITLE: Immunoassay method for determining the specificity of binding of a monoclonal antibody to an antigen

---------- KWIC ---------

Detailed Description Text - DETX (27):

Overlapping hexapeptides were synthesized on polyethylene pins as described earlier (Geysen, H. M. et al. supra). The peptides were assembled on the pins in the C-to-N terminus direction using 9-fluorenylmethyloxycarbonyl (**Fmoc**) protected amino acids. Briefly, the plastic pins were arranged on polypropylene block supports in a pattern suitable for soaking the tip of each pin into individual well of 96-well polypropylene plates. The pins were prederivatized with a non-detachable 15-atom long spacer ending with a **Fmoc**-b-alanine group. All steps in the synthesis were performed at room temperature. The pin blocks were initially soaked for 30 minutes in a 20% (v/v) **piperidine**/DMF bath to remove the **Fmoc** group generating a free terminal amino group. The pins were then cycled through the following steps: DMF washes (2 times; **2 minutes**), methanol washes (3 times, **2 minutes**), the pins were air-dried for 15 minutes, soaked in DMF (5 minutes) and blotted gently with tissue paper. The preformed active esters (oxobenzotriazine esters for serine and threonine; pentafluorophenyl esters for all other amino acids) of **Fmoc** amino acids (30 mM) were then dissolved in DMF containing 1-hydroxybenzotriazole (30 mM). The solutions were then dispensed immediately in the appropriate wells of 96-well polypropylene plates. The coupling step was initiated by placing the tip of the pins in their respective wells. The pin blocks and the polypropylene plates were carefully placed in sealed plastic trays and the coupling reactions were left to proceed overnight. The **Fmoc** deprotection and subsequent steps were then repeated until all hexapeptides were completed. The final **Fmoc** group on the completed peptides was removed as described above and the resulting free amino group was acetylated (DMF: acetic anhydride: diisopropylethylamine 50:5:1 (v/v/v); 90 minutes). The side-chain protecting groups of all peptides were simultaneously cleaved by soaking the pins in trifluoroacetic acid:phenol:ethanedithiol 95:2.5:2.5 (v/v/v) for 4

hours. The pins were successively washed with dichloromethane (twice for 2 minutes), neutralized with 5% DIEA/DCM (twice for 5 minutes), followed by single dichloromethane wash (5 minutes), air dried (15 minutes), wetted in water for 2 minutes, and soaked in methanol overnight. Remaining traces of solvent were evaporated under vacuum and the blocks were stored in plastic containers at room temperature in the presence of dessicant. Amino acid analysis was performed on ten pins. The peptide substitution per pin ranged in
value from 2 to 4 nanomoles.

Other Reference Publication - OREF (1):
Geysen et al. PNAS 81:3998-4002 (1984).

	U	1	Document ID	Issue Date	Pages
1	X	X	US 20070065949 A1	20070322	65
2	X	X	US 20070055048 A1	20070308	9
3	X	X	US 20070026429 A1	20070201	42
4	X	X	US 20060281670 A1	20061214	56
5	X	X	US 20060223759 A1	20061005	300
6	X	X	US 20060035217 A1	20060216	44
7	X		US 20050255491 A1	20051117	101
8	X		US 20050170376 A1	20050804	214
9	X		US 20040245450 A1	20041209	65
10	X		US 20040180412 A1	20040916	214
11	X		US 20040092736 A1	20040513	73
12	X		US 20040044219 A1	20040304	9
13	X		US 20040034191 A1	20040219	41
14	X		US 20030185890 A1	20031002	40
15	X	X	US 20020025401 A1	20020228	38

	Title	Current OR	Current XRef
1	Method and apparatus for desorption and ionization of analytes	436/173	
2	Process for supported phase synthesis	530/333	536/25.3; 536/55.3
3	BINARY PROBE AND CLAMP COMPOSITION AND METHODS FOR TARGET HYBRIDIZATION DETECTION	435/6	536/24.3
4	Compositions and methods for modulating angiogenesis	514/9	514/12; 514/15
5	Substituted 1,2-ethylenediamines, Methods for Preparing Them and Uses Thereof	514/18	530/331
6	BINARY PROBE AND CLAMP COMPOSITION.	435/6	536/24.1
7	Small molecule and peptide arrays and uses thereof	435/6	436/518
8	Evolving new molecular function	435/6	435/91.2
9	Method and apparatus for desorption and ionization of analytes	250/281	
10	Evolving new molecular function	435/91.2	435/6
11	Collections of compounds	540/569	435/7.1
12	Probe for analysis of nucleic acids	546/268.4	546/270.1; 546/271.7; 546/273.4; 546/277.4
13	Novel peptide-conjugated oligomeric compounds	530/322	
14	Compositions and methods for polynucleotide delivery	424/484	514/44; 514/8; 530/324; 530/325; 530/326; 530/327
15	Optical storage using materials comprising chromophore oligomers which can undergo cycloaddition	428/64.4	369/47.5

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1		Hutchens; T. William et al.							
2		Cool; Vincent et al.							
3		Livak; Kenneth J. et al.							
4		Bresnick; Emery H. et al.							
5		Eickmeier; Christian et al.							
6		Livak; Kenneth J. et al.							
7		Lee, Frank D. et al.							
8		Liu, David R. et al.							
9		Hutchens, T. William et al.							
10		Liu, David R. et al.							
11		Thurston, David Edwin et al.							
12		Sandstrom, Jennie et al.							
13		Manoharan, Muthiah et al.							
14		Zuckermann, Ronald N. et al.							
15		Berg, Rolf et al.							

	Image Doc. Displayed	PT
1	US 20070065949	
2	US 20070055048	
3	US 20070026429	
4	US 20060281670	
5	US 20060223759	
6	US 20060035217	
7	US 20050255491	
8	US 20050170376	
9	US 20040245450	
10	US 20040180412	
11	US 20040092736	
12	US 20040044219	
13	US 20040034191	
14	US 20030185890	
15	US 20020025401	

	U	1	Document ID	Issue Date	Pages
16		X	US 20010029035 A1	20011011	20
17	X	X	US 7252827 B1	20070807	49
18	X	X	US 7214384 B2	20070508	36
19	X	X	US 7135185 B1	20061114	49
20	X	X	US 7122549 B2	20061017	109

	Title	Current OR	Current XRef
16	Oligonucleotide conjugates	435/69.4	536/23.5
17	Conserved motif of hepatitis C virus E2/NS1 region	424/189.1	424/185.1; 424/186.1; 424/192.1; 424/193.1; 424/194.1; 424/196.11; 424/199.1; 424/201.1; 424/204.1; 424/225.1; 424/228.1; 514/12; 514/2; 530/323; 530/324; 530/402; 530/403; 530/826
18	Lipid-conjugated polyamide compounds	424/450	524/728; 552/502; 552/544; 554/35; 554/36; 554/37; 554/79
19	Conserved motif of hepatitis C virus E2/NS1 region	424/228.1	424/178.1; 424/182.1; 424/183.1; 424/189.1; 424/192.1; 424/193.1; 424/196.11; 424/199.1; 424/236.1; 514/12; 530/324; 530/403; 530/826
20	Saframycins, analogues and uses thereof	514/250	544/342

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
16		Eisenhut, Michael et al.	X						
17		Weiner; Amy J. et al.							
18		Zuckermann; Ronald N. et al.							
19		Weiner; Amy J. et al.							
20		Myers; Andrew G. et al.							

	Image Doc. Displayed	PT
16	US 20010029035	
17	US 7252827	
18	US 7214384	
19	US 7135185	
20	US 7122549	

	U	1	Document ID	Issue Date	Pages
21	X	X	US 7098303 B1	20060829	49
22	X	X	US 6962984 B2	20051108	63
23			US 6878805 B2	20050412	48
24	X		US 6809099 B2	20041026	115
25			US 6692907 B1	20040217	48
26			US 6608192 B1	20030819	91

	Title	Current OR	Current XRef
21	Conserved motif of hepatitis C virus E2/NS1 region	530/324	424/185.1; 424/186.1; 424/189.1; 424/192.1; 424/193.1; 424/196.11; 424/197.11; 424/201.1; 424/204.1; 424/228.1; 424/238.1; 530/300; 530/329; 530/350; 530/403; 530/806; 530/826
22	IgA nephropathy-related DNA	536/23.1	436/6; 536/23.5; 536/24.5; 549/515
23	Peptide-conjugated oligomeric compounds	530/327	530/322; 530/328; 530/345; 536/23.1
24	Saframycins, analogues and uses thereof	514/250	544/342
25	Conserved motif of hepatitis C virus E2/NS1 region	435/5	435/7.1; 435/7.2; 435/7.92; 435/7.95; 436/501; 436/518; 436/536; 436/543; 436/820; 436/87; 530/300; 530/324; 530/826
26	Collections of compounds	540/496	

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
21		Weiner; Amy J. et al.							
22		Ishiwata; Tetsuyoshi et al.							
23		Manoharan; Muthiah et al.	X						
24		Myers; Andrew G. et al.							
25		Weiner; Amy J. et al.	X						
26		Thurston; David Edwin et al.	X						

	Image Doc. Displayed	PT
21	US 7098303	
22	US 6962984	
23	US 6878805	
24	US 6809099	
25	US 6692907	
26	US 6608192	

	U	1	Document ID	Issue Date	Pages
27	X		US 6572881 B1	20030603	37
28	X		US 6569450 B1	20030527	37
29	X	X	US 6468986 B1	20021022	50
30	X	X	US 6376655 B1	20020423	101
31	X	X	US 6346375 B1	20020212	246
32	X	X	US 6297370 B1	20011002	77
33	X	X	US 6251433 B1	20010626	49

	Title	Current OR	Current XRef
27	Lipid-conjugated polyamide compounds and related compositions and methods thereof	424/450	524/728; 552/502; 552/544; 554/35; 554/36; 554/37; 554/79
28	Lipid-conjugated polyamide compounds and related compositions and methods thereof	424/450	524/728; 552/502; 552/544; 554/35; 554/36; 554/37; 554/79
29	Compositions and methods for polynucleotide delivery	514/44	424/450; 424/486; 435/320.1; 435/325; 435/455; 435/91.4
30	Physically functional materials	534/573	430/1; 430/2; 524/190; 527/207; 534/829; 534/854; 534/DIG.3
31	NANBV diagnostics and vaccines	435/5	424/189.1; 424/228.1; 530/324; 530/325; 530/326; 530/327; 530/350
32	HCV genomic sequences for diagnostics and therapeutics	536/24.3	435/6; 536/23.1
33	Polycationic polymers	424/486	424/450; 435/320.1; 525/420; 525/54.1; 530/300; 530/333

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
27		Zuckermann; Ronald N. et al.							
28		Zuckermann; Ronald N. et al.							
29		Zuckermann; Ronald N. et al.							
30		Berg; Rolf Henrik et al.							
31		Chien; David Y.							
32		Cha; Tai-An et al.							
33		Zuckermann; Ronald N. et al.							

	Image Doc. Displayed	PT
27	US 6572881	
28	US 6569450	
29	US 6468986	
30	US 6376655	
31	US 6346375	
32	US 6297370	
33	US 6251433	

	U	1	Document ID	Issue Date	Pages
34	X	X	US 6232522 B1	20010515	63
35	X	X	US 6190864 B1	20010220	76
36		X	US 6117974 A	20000912	36
37		X	US 6090912 A	20000718	65
38	X	X	US 5840485 A	19981124	63
39		X	US 5770687 A	19980623	37
40	X	X	US 5731285 A	19980324	9

	Title	Current OR	Current XRef
34	Non-human animal model for systemic lupus erythematosis	800/9	435/325; 435/335; 435/352; 435/355; 435/375; 435/7.2; 514/2; 530/387.1; 530/387.2; 530/403; 800/11
35	HCV genomic sequences for diagnostics and therapeutics	435/6	536/23.1; 536/24.3
36	Libraries of backbone-cyclized peptidomimetics	530/317	436/501; 530/333
37	Topologically segregated, encoded solid phase libraries comprising linkers having an enzymatically susceptible bond	530/300	435/212; 435/213; 436/518; 436/523; 436/528; 436/531; 530/304; 530/334; 530/402; 530/407
38	Topologically segregated, encoded solid phase libraries	435/6	435/7.1; 435/DIG.22; 435/DIG.34; 435/DIG.35; 435/DIG.38; 436/518; 530/300; 530/323; 536/23.1
39	Comformationally constrained backbone cyclized somatostatin analogs	530/311	530/317; 530/328
40	Tachiquinine antagonist tricyclic compounds, preparation of same and pharmaceutical compositions containing such compounds	514/10	514/11; 514/9; 530/317; 530/318

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
34		Harley; John B. et al.							
35		Cha; Tai-An, et al.							
36		Gilon; Chaim et al.	X						
37		Lebl; Michal et al.	X						
38		Lebl; Michal et al.							
39		Hornik; Vered et al.	X						
40		Pavone; Vincenzo et al.							

	Image Doc. Displayed	PT
34	US 6232522	
35	US 6190864	
36	US 6117974	
37	US 6090912	
38	US 5840485	
39	US 5770687	
40	US 5731285	

	U	1	Document ID	Issue Date	Pages
41		X	US 5223400 A	19930629	14

	Title	Current OR	Current XRef
41	Immunoassay method for determining the specificity of binding of a monoclonal antibody to an antigen	435/7.93	435/5; 435/7.1

	Retrieval Classif	Inventor	S	C	P	2	3	4	5
41		Ling; Victor et al.	X						

	Image Doc. Displayed	PT
41	US 5223400	